



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/694,221

10/28/2003

Yi-Ru Chen

3319-0105P

2978

2292

7590

10/22/2004

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

CHAPMAN JR, JOHN E

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,221

Applicant(s)

CHEN ET AL.

Examiner

John E Chapman

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The abstract of the disclosure is objected to because in line 13, "is functioned" should be changed to --funtions--. Correction is required. See MPEP § 608.01(b).

2. The disclosure is objected to because of the following informalities:

Page 4, line 24, "cooperated" should be changed to --presented--.

Page 4, line 26, "your esteemed members of reviewing committee" should be deleted.

Page 6, line 13, "must has" should be --must have--.

Page 6, line 30, "An plating" should be -- A plating--.

Page 8, lines 3-5, the sentence should be deleted.

Appropriate correction is required.

3. The following is a quotation of the first and second paragraphs of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is not clear how "performance-adjusting device" 30 in Fig. 5 (and 40 in Fig. 6) adjusts the performance of an inertial sensor. The device 30 (and 40) appears to comprise an inertial

Art Unit: 2856

sensor *per se* and not a device for adjusting the performance of an inertial sensor. Note lines 11-14 of the Abstract.

5. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear what is meant by “a performance-adjusting device” in claim 1, line 1. As best understood, the disclosed apparatus is an inertial sensor and not device for adjusting the performance of an inertial sensor.

It is not clear what is meant by a side of the suspension structure to be “shown as a suspending structure” in claim 1, lines 3-4. Does this mean simply that the side of the suspension structure is suspended? It is not clear what is meant by a side of the micro-electroplating structure to be “shown as a suspending structure with a specific altitude” in lines 6-7.

Regarding claim 2, it is not clear what is meant for a side of the arm to be “shown as a suspending structure” in line 4. Likewise for the platform in lines 5-6.

Regarding claim 7, there is no antecedent basis for either “the sacrificial layer” in 12 or “suspension structure layer” in line 13.

6. Claims 1, 4 and 5, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Shinogi et al.

Art Unit: 2856

Shinongi et al. discloses an inertia sensor in Fig. 10 comprising a suspension structure 1 and a weight 4 formed by electroplating (col. 1, lines 20-22).

Regarding claim 4, the suspension structure 1 is a vibratory structure in that it inherently vibrates in response to vibrations.

7. Claim 7 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shinogi et al.

The only difference, if any, between the claimed invention and the prior art consists in the method of electroplating the weight 4. Claim 7 is a product claim, and it is not apparent that the product formed by the recited method of production differs from that disclosed in Shinogi et al. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985).

8. Claims 1 and 4-6, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Lin et al.

Lin et al. discloses an inertia sensor 200 comprising a suspension structure 208 and an inertial mass 207 formed by electroplating (col. 5, lines 48-51).

Regarding claim 4, the suspension structure 1 is a vibratory structure in that it inherently vibrates in response to vibrations.

Art Unit: 2856

Regarding claim 6, the suspension structure comprises a supporting structure 202, a signal isolation layer 220 and a signal connecting path 204, 208 (col. 5, lines 48-51).

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al.

Lin discloses an inertial sensor 800 in Fig. 7 comprising an arm 808, a platform 806 and an inertial mass 807. The arm may be at opposite sides rather than corners (col. 7, lines 16-17). Accordingly, the only difference between the claimed invention and the prior art consists in providing a second inertial mass 807. It is known in the art to provide a second mass symmetrical with a torsion hinge in order to provide a balanced inertial mass for measuring angular acceleration. Accordingly, it would have been obvious to one having ordinary skill in the art to provide a second inertial mass 807 in order to measure angular acceleration.

10. Claim 7 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lin et al.


The only difference, if any, between the claimed invention and the prior art consists in the method of electroplating the inertial mass 207. Claim 7 is a product claim, and it is not apparent that the product formed by the recited method of production differs from that disclosed in Lin et al. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985).

Art Unit: 2856

11. Claim 3 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st and 2nd paragraphs, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John E Chapman
Primary Examiner
Art Unit 2856